



Water Resources Division
Resource Management Directorate
Nunavut Regional Office
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Your file - Votre référence
3AM-ARV1016
Our file - Notre référence
GCDocs# 96960082

August 9, 2021

Sylvia Ekelik
Licensing Administrative Assistant
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU, X0B 1J0
sent via e-mail: licensing@nwb-oen.ca

Re: Crown-Indigenous Relations and Northern Affairs Canada's comments on 3AM-ARV1016 Hamlet of Arviat 2020 Annual Report

Dear Ms. Ekelik,

Thank you for the May 7, 2021 invitation to review the referenced Annual Report, submitted by the Government of Nunavut, Department of Community and Government Services on behalf of the Licensee. This annual review is for Arviat's expired Type A Water Licence No. 3AM-ARV1016.

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) examined the submitted Annual Report pursuant to its mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Crown-Indigenous Relations and Northern Affairs Act*. Please find CIRNAC comments and recommendations in the attached Technical Memorandum.

If there are any questions or concerns, please contact me at 305-501-4047 or Andrew.Keim@canada.ca.

Sincerely,

Andrew Keim,
Water Resources
Nunavut Regional Office



Technical Review Memorandum

Date: August 9, 2021

To: Sylvia Ekelik, Licensing Administrative Assistant, Nunavut Water Board

From: Andrew Keim, Water Resources, CIRNAC

**Subject: Crown-Indigenous Relations and Northern Affairs Canada Review of the
2020 Annual Report for expired Type A Water Licence No. 3AM-
ARV1016**

Region: ☐ Kitikmeot ☒ Kivalliq ☐ Qikiqtani

A. BACKGROUND

Arviat is the southernmost community on the Nunavut mainland and is close to the geographical centre of Canada. Arviat's population currently sits at approximately 2,660 persons.

The Hamlet of Arviat (the Hamlet) obtains its water from Wolf River, located 8.0 km southwest of the Hamlet. The current authorized quantity of water used is not to exceed 86,000 m³ annually which is pumped from Wolf River and transferred via overland pipeline to three water reservoirs in the community.

A new water treatment (2020) and truck-fill station adjacent to the reservoirs provides treatment of the water through a series of strainers, media filters, cartridge filters, and UV disinfection, followed by a chlorination disinfection system for contact time. The facility then pumps water into the water trucks through two separate truck-fill arms for delivery.

The Hamlet provides daily trucked sewage collection service. The sewage is trucked to a sewage lagoon approximately 2.8 km southwest of the Hamlet that was commissioned in 2005. Effluent seeps at a slow continuous rate through the exfiltration lagoon berm and into the wetland treatment area.

The Hamlet's solid waste management facilities consists of a landfill (solid waste disposal area), bulky metals area, and hazardous waste storage area. Solid waste is collected and trucked to the landfill approximately 2.8 km southwest of the Hamlet. The bulky metals area is located 0.7 km north of the landfill area. Hazardous waste is stored next to the Hamlet garage.

It is noted that the Licensee, through the Government of Nunavut, Department of Community and Government Services (CGS) has submitted renewal-amendment application package to the Nunavut Water Board on September 16, 2020. The application includes the recent upgrades to the water treatment plant and reservoir, as well a request for an increase in the



annual resupply from Wolfe Creek to meet increasing community consumption levels. The application references the findings of the Hydrological Assessment completed on Wolfe Creek. CGS also plans to submit an additional application to include the expansion of the lagoon in the new license however this is currently delayed in the Nunavut Impact Review Board process.

CIRNAC provides the following comments and recommendations pertaining to the 2020 annual report. Comments related the application for renewal and amendment to the expired Type A water licence will be provided under separate cover. A summary of the subjects of recommendations can be found in Table 1. Documents reviewed as part of this submission can be found in Table 2 of Section B. Detailed technical review comments can be found in Section C.

Table 1: Summary of Recommendations

Recommendation Number	Subject
R1.	Expired Water License
R2.	Map of Monitoring Stations
R3.	Monthly Monitoring and Sampling
R4.	Emergency Decant

B. DOCUMENTS REVIEWED

The following table (Table 2) provides a summary of the documents reviewed under the submission.

Table 2: Documents Reviewed

Document Title	Author, File No., Rev., Date
3AM-ARV1016 2020 Annual Report	Sarah Collins, Government of Nunavut, Department of Community and Government Services May 7, 2021.



C. RESULTS OF REVIEW

1. Expired Water License

Comment:

CIRNAC notes that water licence 3AM-ARV1016 expired in 2016. It is recognized that an application for renewal and amendment has been submitted by the Government of Nunavut, Department of Community and Government services on behalf of the licensee.

In response to the completeness check, the Government of Nunavut committed to providing feasibility studies for upgrades to the sewage lagoon and solid waste facility in January 2021 as well as updated Operation Manuals and Plans in March 2021. These have not yet been shared.

Recommendation:

(R-01) CIRNAC recommends that the Government of Nunavut ensure that a renewed Type A licence is in place before the next annual report.

2. Map of Monitoring Stations

Comment:

The Licensee is reminded that it would be helpful for the review if a diagram or map to indicate the locations of the five monitoring stations was included in the 2020 Annual Report.

Recommendation:

(R-02) CIRNAC recommends that a location diagram or map be included in future Annual Reports.

3. Monthly Monitoring and Sampling

Comment:

Pursuant to Part H of the now expired Type A water license, Item 9 reads in part *"The Licensee shall sample monthly at Monitoring Program Stations ARV-2a, ARV-4, ARV-5, ARV-6, and Station ARV-2b upon commissioning of the New Solid Waste Disposal Facility, during the months of May to August, inclusive."*

Recommendation:

(R-03) CIRNAC recommends that sampling be conducted during periods of visible flow. If no such flow is visible at that time, that fact should also be recorded and provided in the Annual Report to indicate why sampling was not conducted during that period. Sample



results provided indicate that sampling was completed in the months of July and September only.

4. Emergency Decant

Comment:

An authorized Emergency Decant of the lagoon was conducted in June 2020 under the authority of the Inspector. No sampling results were provided following the decant.

Recommendation:

(R-04) CIRNAC recommends that sampling is completed during and immediately following the decant of the sewage lagoon when an emergency decant has been authorized by an Inspector, and that results from that sampling event be included in the Annual Report.